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ABSTRACT

Research reports are cited in this examination of the applicability of the findings of a 1971 NORCAL Research Group student attrition study and Extended Opportunity Programs and Services (EOPS) legislation to today's non-traditional student. After brief descriptions of the composite profile of the "high risk" student, which was developed by the NORCAL study, and the intervention strategies incorporated into EOPS activities to meet the needs of these students, the report cites data from more recent studies which reconfirm the NORCAL finding that attrition, especially among poor, minority students, remains a costly and significant problem. Additional studies are then examined, which demonstrate that despite the increased enrollment of older, non-traditional students, intervention strategies aimed at the individual student, such as financial and tutorial assistance, peer counseling, and academic support services, can have a significant impact on the retention and achievement of "high risk" students. The paper concludes with five recommendations for colleges concerned with retention: increasing descriptive research to identify differential rates of retention among segments of the student population; involving instructional faculty in the study of course withdrawal; focusing on promoting the academic success of "high risk" students; conducting academic assessment of new students; and providing student support services. (JP)

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On Improving Student Retention: Reflections on the NORCAL Project Following a Decade of Change

Background

The NORCAL project on student attrition was conducted as a three-phase cooperative research effort by 22 California public community colleges between 1968 and 1971. In Phase I, specific characteristics associated with a high risk of attrition were identified and documented. In Phase II, a procedure to identify individual students with a "high risk" profile was developed and validated. In Phase III, the participating colleges conducted experimental research to reduce student attrition by implementing various intervention strategies such as counseling, tutorial assistance, and financial aid. Throughout, the attention of the Project was upon the first-time, full-time community college student who had entered the community college immediately following high school graduation. (MacMillan, 1970; Kester-MacMillan, 1973)

The composite picture of the "high risk" student of the NORCAL Project could be drawn as follows:

1. Minority - Most likely to be Black; least likely to be Oriental.
2. Low Income - Most likely to come from a lower income family; most likely to express concern over financial support for college.
3. Encouragement - Less likely to feel or perceive parental support for college attendance.
4. Investment - Less likely to report college as being "Very Important to Me, personally."
5. Aspiration - Less likely to state a transfer goal; most likely to report "undecided."
6. Ability - Low ability males are three times likelier to withdraw than low ability females; overall, low ability is highly associated with attrition. (MacMillan, 1970)

Although the composite model of "high risk" showed no surprizes, the NORCAL project developed specific predictive proceedures to identify individual students as "high risk," thereby creating the opportunity for direct intervention and support for such students.

The flow of history was very much on the side of the NORCAL Project. At the time of the first two phases of the study, SB 164 (Alquist) had just been passed in California, creating the statewide impetus for Extended Opporunities Programs and Services (EOPS) to meet the needs of exactly the kinds of students identified in the NORCAL Project as "high risk." The response of the colleges during the experimental phase of the Project was very gratifying: of the eleven (11) colleges actually implementing experimental designs, all reported reducing attrition among high risk students experimentally treated; six (6) of the eleven (11) reported statistically significant differences in attrition between experimental and control groups. In addition, the experimenting colleges reported a higher rate of re-enrollment and academic achievement (g.p.a.) among experimentally treated students, as compared with the control groups. (Kester, 1971)

Common to all of the successful experimental programs designed to reduce the pattern of student attrition was an emphasis upon student support services and counseling. It was also found, however, that dramatic reductions in student attrition could be effected without major program or service modifications. Indeed, the pattern was one of making more effective use of available resources. As one of the Project reports stated it, "Not only is it clear that the provision of special services makes a measurable difference in attrition and performance, it is also clear that the potential of providing these services exists within every community college. . .The problem of attacking attrition is clearly one of will, not means." (Kester and MacMillan, 1973)

Looking back on the NORCAL Project from the perspective of a decade of change and challenge to the California Community Colleges, it is possible to make a number of observations on the contemporary scene, and to raise questions about the applicability of NORCAL findings to current issues in higher education. Have the changing patterns of student characteristics rendered meaningful intervention for hgih risk students almost impossible? Have the supportive services of EOPS and other student support areas continued to make an impact on attrition and performance? What, from the standpoint of current institutional priorities and needs, can we expect concerning institutional attention to questions of student retention?

Studies on Attrition During the 1970's

A number of studies since 1970 have tended to confirm and elaborate some of the findings of the NORCAL Project. Data on 1972 entering students from the National Center for Education Statistics indicate the following withdrawal rates as of 1974 for students with various characteristics who either received financial aid or did not during college:

Table 1

Total Withdrawal Rates[1] and Graduation Rates of Two Year College Students

Characteristic	Withdrawal Rate		Graduation Rate	
	Aided	Not Aided	Aided	Not Aided
Ability				
Low	53.1	63.3	11.0	4.1
Middle	39.3	47.8	21.3	11.7
High	18.6	43.2	31.3	16.2
Race				
White	34.0	49.1	25.5	12.2
Black	43.5	67.1	11.0	4.1
Aspirations				
Voc-Tech Only	62.8	79.5	13.1	5.1
2 Yr. College	60.0	60.4	20.7	10.7
4 Yr. College	34.5	41.8	24.2	11.3
Grad School	21.6	36.0	22.7	15.7
Socioeconomics				
Low	46.7	64.3	15.8	6.4
Middle	34.5	55.1	25.0	10.4
High	25.0	38.6	22.6	13.8

[1]Source: National Center for Education Statistics, The Condition of Education (1978, Table 3.14)

As it is immediately apparent from the data, low ability, low aspiration, low socio-economic status, and minority students in community colleges showed the highest rates of withdrawal and the lowest rates of graduation of any two year college students on a national level. The impact of financial aid is also evident from the data of Table 1: in many cases, graduation rates for aided students were more than twice the rate for unaided students. In context, however, the statistics represent only a two year span of time, and unaided students may have taken longer to complete degrees not recorded at the time of the study by NCES.

In California, Dr. Dorothy Knoell of the Postsecondary Commission staff conducted a three year follow-up study of some 32,000 first time students in community colleges, publishing as a result a series of reports under the general title, Through the Open Door. In the final report of that study (Knoell, 1976), the following data were shown to reflect the status of students in the sample at the end of the third year:

Table 2
Status of Students at the End of the Third Year
(In Percents)

Type of Enrollment	Persisted 2+ Terms	Still Enrolled	Graduated	In and Out	One Term Only
Full-time:					
Freshmen	44%	9%	16%	17%	14%
Transfers	42	4	18	16	20
Total	44	8	17	16	15
Part-time Day:					
Freshmen	25%	5%	3%	23%	44%
Transfers	24	4	4	19	49
Total	24	5	3	22	46
Evening:					
Freshmen	25%	6%	2%	20%	47%
Transfers	25	5	3	19	48
Total	25	6	3	19	47
Total Sample:	32	6	8	19	35

While the findings of the Through the Open Door study were taken somewhat defensively by many in California community colleges, the fact remains that retention of students is clearly shown to be a significant institutional problem: 35% remained only one term, and an additional 19% showed unpredictable patterns of enrollment and withdrawal during the three year period.

At least one other study of the attrition-retention phenomenon in higher education during the 1970's should be mentioned. It is Alexander W. Astin's study, Preventing Students from Dropping Out. (Astin, 1975) Although some of the recommendations of Astin concerning programs to reduce attrition will be cited later in this paper, it should be noted that the study is of absolutely no value in understanding attrition at the two year college level. Astin's definition of "droupout" is "only those students who originally planned to earn a bachelor's degree but who subsequently failed to do so." (Astin, 1975, p. 6) Since the data sample of over a million students from 358 two and four year colleges and universities included representatives from

institutions granting the Associate in Arts degree, Astin's categorization of such students who may have achieved the degree as "Dropouts" seems curious. Nonetheless, he specifically defines as a "Dropout: any student who:1)is not enrolled in graduate or professional school; 2) does not have a bachelor's (or nigher) degree; 3) is not currently enrolled full time as an undergraduate; and 4) has not been continuously enrolled since 1968; 5) has not completed four years of undergraduate work since 1968; and/or 6) is no longer pursuing the bachelor's (or a higher) degree. (Astin, 1975, p.10)

While the research from NCES, Astin, and Knoell tended to confirm that student attrition is a costly and significant problem to two year colleges, other student trend data tended to indicate that intervention of the type indicated for first-time, full-time freshman students would probably make little substantive difference in light of changing student participation patterns of the 1970's. In California Community Colleges, for example, there was a significant growth in the part-time student population during the 1970's. The most recent Information Digest from the California Postsecondary Commission (1979), documents this trend between 1974 and 1978. Data from the Digest are shown in Table 3 below.

Table 3

Full-Time and Part-Time Enrollments, CCC's

Year	Full-Time		Part-Time	
	N	%	N	%
1974	324,281	33.8	635,426	66.2
1975	274,473	34.0	727,075	66.0
1976	328,107	30.6	744,997	69.4
1977	321,133	28.7	798,996	71.3
1978	285,133	27.2	762,034	72.8

The trend data between 1974 and 1978 have continued to follow the same pattern over the current academic year, with part-time enrollments predominating on every campus. Along with all other segments of higher education, the California Community Colleges are also experinecing the general effects of the decline of 18 year olds in the population, expected to decrease between 14 and 15 percent between 1975 and 1985. Further, many young people are choosing to delay college entrance for one or more years following graduation, with the net result being to force the average age on each campus higher and higher. Finally, the return to campus of older students and increasing numbers of women re-entering higher education after extended absences from formal schooling, all make the study of attrition an even greater challenge today than it was a decade ago.

Meeting the Current Needs; Approaches with Potential

Despite the changing demography of the student population, and the increasing complexity of identifying the "high risk" students among the several sub-populations on the campus, there have been a number of projects reporting excellent results in student retention. Perhaps most familiar to those closest to the NORCAL Research Group is Paul Preising's recent follow-up of the Fall, 1973 EOPS students at San Jose City College. (Preising, 1979) What Preising's research confirmed was that a comprehensive and coordinated program of financial assistance, supportive tutorial assistance, peer counseling and academic support services can in fact have dramatic impact upon the retention and achievement of students who would have been identified as "high risk" by the NORCAL model of prediction. After eight semesters, the EOPS students follow-ed up at San Jose City College, as compared with all other students entering the same term, showed: a higher retention rate; a higher rate of completion of Associate degrees; higher GPA's; higher rate of enrollment in 4 year colleges, and; completion of an overall higher number of units. It is to be hoped that the research design developed by Preising may be adopted in other California Community Colleges, and that an overall assessment of the outcomes of EOPS in the terms of performance and persistence of "high risk" students can be made on a broader scale basis.

Over the last two (2) years, a number of researchers throughout California have begun to address the attrition-retention issue with new commitment. Bob Clark of Reedley College has developed an evaluation of a Special Counseling Project aimed to assist those "who graduated from high school with less than a 2.0 grade point average, and those who did not graduate from high school." (Clark, 1979) Also under study at Reedley was the special group of students who are late applicants to the college. (Clark, 1980) Robert Garber of West Los Angeles College analyzed the differences in student characteristics among those new students who showed the highest attrition and retention. (Garber, 1979). Burton Miller of Santa Barbara City College conducted a comprehensive analysis of attrition patterns for each academic department, as well as for the total institution. (Miller, 1978) Finally, Monterey Penninsula College developed specific strategies for reducing attrition among Older Students, based on a clear understanding of the differences in student characteristics this particular clientele represented, in contrast to the regular, full-time day enrollment. (MPC, 1979)

Each of the recent studies tends to confirm and amplify the basic observations of the NORCAL Project concerning programs that make a difference in attrition: that attrition can be reduced in a population of "high risk" students by implementing specific programs that pay individual attention to the needs of these students, and; that colleges have within their means the capability of reducing attrition without making major modifications of program and service configurations currently in existence.

The Future of Retention Efforts: Five Recommendations

The literature of the 1970's provides a sound foundation for continuing the task of research on student attrition-retention. While a number of factors may limit the possibility of replicating the NORCAL study to develop new predictive weights in a formula to identify individual "high risk" students, this should not mean that systematic efforts cannot or should not be undertaken by every community college in which concern for retention is high. Thus, at a minimum, it is recommended that colleges with high concern begin to address the issue of retention by:

> Conducting descriptive reseach to document the differential rates of retention among significant segments of the student population (i.e., day, evening, full-time, part-time, declared versus undeclared majors, "special counseling" students, and other target populations).

Secondly, since student attrition begins with withdrawal from only one course at a time, it is recommended that:

> The instructional faculty become directly involved in the study of individual student withdrawal from courses at a departmental or divisional level, and that departmental/divisional strategies to reduce course withdrawals be designed and implemented as appropriate.

While much could be said to justify the second recommendation, perhaps the greatest weight of evidence in its support is the finding of Astin (1975) that the reason most frequently given for leaving college is "boredom with courses." "In these instances," Astin counsels, "institutions would be well advised to undertake studies of reasons for student boredom, including poor teaching, uninteristing courses, superfluous requirements, and so forth." (Astin, 1975, p. 149)

Throughout the literature on student attrition-retention, it is consistently shown that academic performance is the single most critical factor in the decision of the student to remain or withdraw. The demonstrated success of EOPS approaches in California is based largely on improving academic performance among students with limited educational backgrounds, particularly in the areas of readin and written expression. Courses or programs designed to improve reading and study skills, tutorial assistance and other forms of direct academic support for "high risk" students have consistently been shown to have the most significant impact on the reduction of attrition. Thus the third recommendation is that:

> The primary focus of retention strategies in community colleges be placed on efforts to enhance the probability of academic success for students identified as "high risk."

In light of the first recommendation, the task of enhancing the probability of success among high risk students needs to be differentiated according to each significant target population. Monterey Penninsula's efforts to address the special needs of older students is instructive in this regard. Recognizing that adult, part-time learners are not necessarily motivated by the same factors as their younger, full-time counterparts, the MPC staff recommended five (5) ways to re-structure courses to respond to the learning needs of older students. These five recommendations were:

1. Distinguish between requirements for a letter grade and requirements for 'credit' only.
2. Divide courses into one unit 'modules' to increase the possibility of successful completion of at least a portion of the stated learning objectives of the course.
3. Faculty should use office hours to assist students with 'problem solving,' so that students know they can be heard and helped to remain in a course if they are encountering difficulties.
4. Instructors should function as counselors in referring students to other campus services available to them.
5. Instructors should use some technique of discovering who is enrolled in each class and why, using this information for individualization, whenever necessary.

The recommendations by the MPC staff suggest the need for a strong and active link between traditionally defined "student services" functions and the instructional functions and staff of the college. Lewis B. Mayhew, in his recent book, Surviving the Eighties (Mayhew, 1980), has placed particular emphasis on the importance of academic advising in enhancing student persistance and performance. In Mayhew's words, "Of the many activities that an instituttion can undertake to reduce attrition, a well-developed advising system should be assigned highest priority for the small to medium-sized institution." (Mayhew, 1980, p. 199) Of the many possible benefits of such an advising system as proposed by Mayhew, perhaps two (2) are most central to the retention question. First, there is the obvious and immediate benefit of bringing the student into direct contact with the staff of the college in an atmosphere which reinforces helpfulness and encouragement during the initial days and weeks of contact with the institution. Secondly, well planned advisement provides the student with the clearest possible information upon which he can evaluate each of his/her proposed courses realistically in terms of its specific objectives as they relate to his/her personal and academic goals.

In light of the importance of academic aptitude and achievement data as a basis for individual student planning, a fourth recommendation is:

> That retention programs include the opportunity for students to participate in a testing and self-assessment program through which they might gain a more realistic understanding of their potentials and a more sound assesment of their academic and career goals.

When the NORCAL Project was conducted a decade ago, it was the common practice of community colleges to require some form of entrance testing, usually the ACT or SAT examination. Because of the availability of academic assessment data, our finding at that time was that the single most important predictor of attrition was academic ability, as reflected in standard test scores, and considered by gender (low ability females tended to persist much longer in community college than did low ability males). Since the early 1970's, and for reasons which may be generally defensible in light of the open admissions policies of the community colleges, the practice of requiring an initial battery of tests has all but disappeared from the California scene. It would seem that students with little or no information concerning their potential of academic success in the regular college curriculum would be better served by at least having access to a program of individual assessment, possibly in conjunction with activities designed to assist him/her with the clarification of personal values and goals.

Finally, since the evidence of the NORCAL Project has continued to be reinforced throughout the decade of the 1970's concerning the importance of a diverse and comprehensive student services programs, it is recommended that:

> Retention programs continue to emphasize a comprehensive and well-differentiated program of student support services to meet the needs of identified target populations.

Of all models demonstrated to be effective in enhancing retention, the "EOPS" model of coordinated financial support, peer and professional counseling, development of basic academic skills, and related social and cultural activities seems to be the very best for the full-time student who qualifies for such assistance. Fortunately, recent legislation and regulation has tended to encourage and promote the development of strong supportive services to veterans, the physically handicapped, and others with identified special needs. As colleges continue to experience the financial pressures to "do more with less", we are likely to see some erosion of support for the efforts of student services professionals. In such an historical context, the burden will be upon student services to demonstrate the direct relevance of each function to increasing and enhancing student retention. In some instances, this may result in greater specialization or differentiation of functions, increased use of personnel who were lebeled a decade ago as "paraprofessionals", and greater integration of the instructional and supportive functions of the college.

Concluding Observations

What can we make of the experience of NORCAL after a decade of change? Perhaps the most obvious conclusion is in the old expression, "the more things change, the more they remain the same." After ten years, we still struggle with the same basic questions concerning student attrition. We still feel that we are losing too many, for the wrong reasons, and at the wrong times. We sense that our institutions have changed with time, and that our students don't tend to come to us in the same neat packages of "firt-time, full-time" that used to characterize our major enrollment pool. We see an increase in consumerism in the attitudes and expectations of students, an attitude which demands relevance to immediate academic and career goals. We see in many cases evidence of fulfillment of the promise of equality of educational access for students whose educational or social characteristics would have marked them as "high risk" a decade ago.

At the same time, we sense a need for revitalization of commitment to the task of reducing attrition. In a time of increased competition for an ever-shrinking student population, and in an era of diminishing public support for educational spending, we sense a very practical motive for improving retention statistics. A decade ago, at the end of a crest of national commitment to provide equality of educational access at the two year college level for all of California's citizens, our motives for studying retention may have bee somewhat different. However, there is no essential conflict between the lofty motives of the sixties and the practical realities of the eighties. Although the issues continue to change in the larger society which we serve as community colleges, there remains the need for creative and responsive leadership to raise important social questions, and to keep our institutions open to growth and change. Robert Greenleaf, in a recent book called Servant Leadership, has suggested that the major challenge to leaders and to institutions is to adopt an attitude of service toward those whom we seek to benefit. A decade ago, we found in the NORCAL Project that the most visible impact on attrition was found in those institutions which demonstrated the attitude of servant toward the potential drop-out. Where the commitment to serve was manifest, retention increased. Where students experienced a sense of immediate and continuing support, attrition was cut in half. Contrasting the attitudes of persons and institutions that are servant-first in their orientation from the opposite extreme (leader-first), Greenleaf has written:

> The difference manifests itself in the care taken by the servant-first to make sure that other people's highest priority needs are being served. The best test, and difficult to administer, is: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least priveleged in society; will they benefit, or at least not be further deprived?

For the decade of the eighties, as of the seventies, the question of retention, as well as of the meaning of each of our individual and institutional commitments, is somehow revealed in Greenleaf's question: how do your students grow?

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